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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/713,811	11/14/2003	Carolyn L. Sheldon	COS-819 (APIP-1151US)	2575
25264	7590	12/07/2005	EXAMINER	
FINA TECHNOLOGY INC PO BOX 674412 HOUSTON, TX 77267-4412			ZACHARIA, RAMSEY E	
			ART UNIT	PAPER NUMBER
			1773	
DATE MAILED: 12/07/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/713,811

Applicant(s)

SHELDON ET AL

Examiner

Ramsey Zacharia

Art Unit

1773

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 1-27 are rendered indefinite because it is unclear how a 'film' can have a tenacity with the units of 'g/den' since a film does not have a denier.
5. Claim 16 recites the limitation "the co-catalyst" in line 1. There is insufficient antecedent basis for this limitation in the claim. Note that claim 16 depends from claim 13, while the co-catalyst is first introduced in claim 15.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 1773

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-21, 26, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Gownder et al. (US 2003/0183975 A1).

Gownder et al. teach a polymer slit film comprising an isotactic polypropylene prepared in the presence of a metallocene catalyst (paragraph 0012). The film has a draw range between about 4.5:1 to 12:1 (paragraph 0033). The catalyst may be a mixture of catalysts including organoaluminum compounds (paragraph 0028). The film may have a tenacity of at least 5 g/den (Figure 3). Additives may be included in the polymer (paragraph 0023).

The limitations of claims 3, 7, and 8 are met because these claims are not directed to a woven product. Rather, these claims merely require that the film be capable of being woven into a woven product. Since it is well known in the art to use polypropylene slit films in forming woven products, the slit film of Gownder et al. is capable of being woven into a woven product.

Regarding claims 10, 11 and 27, the polypropylene of Gownder et al. should inherently comprise an isotacticity of less than about 99.0% and an insertion error of more than about 2.0% because Gownder et al. uses a metallocene catalyst to form the isotactic polypropylene.

According to the instant specification, the use of a metallocene catalyst (as opposed to a Ziegler-Natta catalyst) inherently results in a polypropylene that comprise an isotacticity of less than about 99.0% and an insertion error of more than about 2.0% (see Example 1, paragraph 0034 on pages 15-16).

8. Claims 1-14 and 17-27 are rejected under 35 U.S.C. 102(e) as being anticipated by Sheldon et al. (US 2004/0013870 A1)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Sheldon et al. teach a polypropylene slit film tape that may be used in woven materials or fabrics (paragraph 0002). The tape has a draw ratio of about 3:1 to 10:1 and a tenacity of at least 5 g/den (paragraph 0007). The polypropylene is an isotactic polypropylene that may be prepared using a metallocene catalysts (paragraph 0028). Additives may be incorporated into the tape (paragraph 0030).

Regarding claims 10, 11 and 27, the polypropylene of Gownder et al. should inherently comprise an isotacticity of less than about 99.0% and an insertion error of more than about 2.0% because Gownder et al. uses a metallocene catalyst to form the isotactic polypropylene. According to the instant specification, the use of a metallocene catalyst (as opposed to a Ziegler-Natta catalyst) inherently results in a polypropylene that comprise an isotacticity of less than about 99.0% and an insertion error of more than about 2.0% (see Example 1, paragraph 0034 on pages 15-16).

Regarding claims 23 and 25, it appears from the instant specification that woven products of a tape comprising isotactic polypropylene having a tenacity of at least about 2.5 g/den typically exhibit a tenacity of within about 10.0% of the tenacity of the film product (see paragraph 0014 on page 5).

Claim Rejections - 35 USC § 102 / 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-20, 26 and 27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Saito et al. (U.S. Patent 6,096,843).

Saito et al. teach an isotactic polypropylene formed from propylene polymerized in the presence of a metallocene catalyst in combination with an organoaluminum compound (column 2, lines 11-54). The polypropylene is designed to exhibit a high tenacity (column 1, lines 10-18). The polypropylene may be formed into a film or fiber (column 8, lines 25-31). In the embodiment of Example 3, the polypropylene is formed into a film and drawn at ratios of 4.2:1 and 8.2:1 (column 11, line 55-column 12, line 4).

Saito et al. do not report the tenacity of their polymer in g/den. However, the polymer is designed to have a high tenacity, is formed using the same polymerization system as the instant invention (i.e. a metallocene catalyst in conjunction with an organoaluminum compound), and is drawn at the same ratio as the instant invention (i.e. about 5.0:1 to about 10.0:1). Therefore, the

Art Unit: 1773

tenacity of the resulting material should inherently be the same as that of the instant invention. Moreover, in the event that the tenacity of the film of Saito et al. is not inherently the same as that of the instant invention, it would be obvious to one skilled in the art to optimize the reaction and processing conditions to obtain a give tenacity since Saito et al. is directed towards producing a polypropylene having a high tenacity.

Claim Rejections - 35 USC § 103

11. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schlecker (U.S. Patent 5,393,598) in view of Gownder et al. (US 2003/0183975 A1).

Schlecker teaches a fabric comprising a layer of woven from flattened tapes of polypropylene (column 3, lines 15-22).

Schlecker is silent as to the physical properties of the polypropylene flattened tapes.

Gownder et al. teach a polypropylene slit tape as outlined above. The slit tape of Gownder et al. exhibits greater percentage elongation at break and a higher tenacity than conventional polypropylene tapes (paragraph 0013).

One skilled in the art would be motivated to use the tape of Gownder et al. as the flattened polypropylene tapes of Schlecker because it exhibits greater percentage elongation at break and a higher tenacity than conventional polypropylene tapes.

Regarding claims 23 and 25, it appears from the instant specification that woven products of a tape comprising isotactic polypropylene having a tenacity of at least about 2.5 g/den typically exhibit a tenacity of within about 10.0% of the tenacity of the film product (see paragraph 0014 on page 5).

Art Unit: 1773

12. Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schlecker (U.S. Patent 5,393,598) in view of Saito et al. (U.S. Patent 6,096,843).

Schlecker teaches a fabric comprising a layer of woven from flattened tapes of polypropylene (column 3, lines 15-22).

Schlecker is silent as to the physical properties of the polypropylene flattened tapes.

Saito et al. teach a polypropylene material as outlined above. The polypropylene of Saito et al. exhibits high tenacity, heat resistance, and high-temperature rigidity (column 1, lines 10-17).

One skilled in the art would be motivated to form the flattened tapes of Schlecker with the polypropylene of Saito et al. to yield a woven fabric having high tenacity, heat resistance, and high-temperature rigidity

Regarding claims 23 and 25, it appears from the instant specification that woven products of a tape comprising isotactic polypropylene having a tenacity of at least about 2.5 g/den typically exhibit a tenacity of within about 10.0% of the tenacity of the film product (see paragraph 0014 on page 5).


Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

Art Unit: 1773

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney, can be reached at (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
Tech Center 1700